New AGN from a Multiwavelength ROSAT/IRAS/NVSS/2MASS Cross Correlation
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We report results of a multi-wavelength cross-correlation of the combined ROSAT Bright and Faint Source Catalogs with the IRAS Faint Source Survey, the NRAO VLA Sky Survey, the FIRST Radio Survey, the Two Micron All-Sky Survey, and the APM and COSMOS catalogs of optical objects from digitized Schmidt plate archives. The science goals are to search for new samples of AGN which may suffer significant dust extinction and therefore be missing from previous optical surveys. We have found over 1500 sources with an identification reliability between the IRAS FSC and the ROSAT catalogs greater than 90%, using the identification method of Lonsdale et al (1998). We present details of the identifications for the subset of the sample which are strongly detected in the IRAS 60 micron band, where we find that 370 members of our high reliability sample have no previous spectroscopic identifications within SIMBAD or NED. For the extragalactic sample we find a strong correlation between the Fir/Fx and F60/F25 colors, as seen in the much smaller sample of Risaliti et al. 2000. We discuss interpretation of these results in terms of dust obscuration and the "missing" type II AGN population.
This work is supported by NASA, and makes use of NED.